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ABSTRACT

This study measured the relationship between job satisfaction and organizational climate on a heterogeneous sample, and the reported incidence of stress-related illnesses as a moderator of the climate-job satisfaction relationship. Subjects were 70 full-time employees who completed a four-part questionnaire consisting of the Litwin and Stringer Organizational Climate Questionnaire, the Job Descriptive Index, a 20-item stress symptom measure, and demographic information. The results showed that certain facets of job satisfaction and certain dimensions of organizational climate were correlated, but that the two constructs were not redundant. No evidence was found for a relationship between stress and worker perceptions of organizational climate. There was a significant relationship between some facets of job satisfaction and stress. The results suggest that it is not the organizational climate that creates a stressful environment, but the work itself and the people around the worker that lead to perceptions of the workplace as stressful. (NB)

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Relationships Between Organizational Climate, Job Satisfaction and Stress-Related Illnesses

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Relationships Between Organizational Climate, Job Satisfaction and Stress-Related Illnesses

Research on organizational climate has primarily focused on two areas: 1) attempts to relate climate to organizational variables, such as individual performance (Downey, Hellriegel, and Slocum, 1975; Pritchard and Karasick, 1973; Waters, Roach, and Batlis, 1974), organizational performance (Kaczka and Kirk, 1968), turnover (Batlis, 1980), communication (Muchinsky, 1977), organizational practices (Lafollette and Sims, 1975), and job performance of the hard-core unemployed (Friendlander and Greenberg 1971); and 2) attempts to prove that climate and job satisfaction are redundant (Guion, 1973; Johannesson, 1973) or, alternatively, that climate and job satisfaction are useful and separate constructs (Field and Abelson, 1982).

Guion (1973) and Johanssen (1973) have argued, based on confusions in interpretation and level of analysis of the climate construct itself, and cluster analyses of job satisfaction and climate scales respectively, that climate research has been recapitulating the job attitude research. Johannessen suggests that redundancy between climate and satisfaction was a likely outcome because climate researchers, in constructing organizational climate questionnaires, borrowed items from old satisfaction measures.

On the other hand, Field and Abelson (1982) claim that although most research has shown that climate and job satisfaction are correlated, they are not identical constructs. Other research has supported this claim (e.g., Batlis, 1978, 1980; Friedlander and Margulies, 1969; Payne, Fineman, and Wall, 1976; Joyce and Slocum, 1982; Lafollette and Sims, 1975; Lawlwer, Hall, and Oldham, 1974; Muchinsky, 1975; Pritchard and Karasick, 1973; Schneider and Snyder, 1975). As distinguished by Field and Abelson, climate is a perceptual description of the work environment, and job satisfaction is a person's affective response to various aspects of the job. In short, climate is primarily descriptive, and job satisfaction is primarily evaluative.

The usefulness of organizational climate as a construct has been limited by measurement and definitional problems. Although the Litwin and Stringer Organizational Climate Questionnaire (Litwin and Stringer, 1968) is typically used to measure climate in business organizations (Schnake, 1983), Field and Abelson (1982) counted ten different climate questionnaires. Each questionnaire uses slightly different scales and scale descriptions. The Litwin & Stringer Organizational Climate Questionnaire (LSOCQ) seems to have factors different from the a priori scales suggested by Litwin and Stringer, and the factors found differ with different samples. Eberhardt and Shani (1984) found only three factors, but when Waters, Roach, and Batlis (1974)

factor analyzed 22 perceptually based organizational climate scales from three climate questionnaires (including the LSOCQ) they found five factors. Schnake (1983) partialled job satisfaction from the intercorrelations of the items on the LSOCQ, and factor analyzed the residual scores, which produced six factors, and improved the dimensionality of the questionnaire over the suggested a priori scales. Lafollette and Sims (1975) and Muchinsky (1976) factor analyzed the LSOCQ and got similar reliability estimates for the a priori scales, but their factor analyses produced six factors, and the descriptions of the factors were slightly different.

A possible cause of the conflicting factor structures found by different studies is the different subject samples used. Because climate is a measure of individuals' perceptions of the work environment, different results might be expected with different organizations. Even within an organization we might expect to see different perceptions of objectively identical work environments, as was found by Johnston (1976) between employees of a small consulting firm who had been with the company fewer than three years and those that had been employed more than three years. On the other hand, we might expect to find greater differences in climate between organizations than within a single organization. Drexler (1977) used the Survey of Organizations as the measure of climate and found a main

effect for organization, which accounted for 42% of the variance in climate. It should not be surprising to find that the same climate measure used with different but fairly homogeneous samples produces different factor structures for each sample--a kind of situational specificity for organizational climates--and different factor structures from the LSOCQ validation sample, which was a hetereogeneous sample comprised of individuals from a number of different organizations.

We examined organizational climate and its relationships with job satisfaction and stress. Stress-related illnesses have been shown to have a negative effect on employees' attitudes (Allen, Hitt, and Greer, 1982; Sharit and Salvendy, 1982), and more specifically on employees' satisfaction with their jobs for a variety of work situations, such as nurses (Bedian, Armenakis and Curran, 1981), teachers (Sutton and Huberty, 1984), and sales (Teas, 1983). Many studies have supported the relationship between stress-related illnesses suffered by workers and self-reports of experienced stress on the job (Beehr and Newman, 1978; Frese and Okonek, 1984; Rousseau, 1978). Jackson, Zedeck, and Summers (1985) found that stress from work context variables such as structure and leadership, was related to tension and job dissatisfaction. However, stress has not been investigated as affecting workers' perceptions of organizational climate, or as a moderator of the climate-

job satisfaction relationship.

The purpose of this study was to measure the relationship between job satisfaction and organizational climate on a heterogeneous sample, and the reported incidence of stress-related illnesses as a moderator of the climate-job satisfaction relationship. If job satisfaction is the affective response of a worker to a job, there should be strong negative correlations between stress and job satisfaction, i.e., generally high stress jobs should produce low job satisfaction. On the other hand, if there are not significant correlations between stress and dimensions of organizational climate, but there are significant correlations between stress and facets of job satisfaction that is evidence that organizational climate is not redundant with job satisfaction.

Method

Subjects

The subjects consisted of 70 full-time employees (30 males, 40 females) who were recruited from an upper level business class at a midwestern university (85%), or who had responded to an advertisement in the school newspaper (15%). All subjects had worked full-time for at least one year (mean = 5.7 years), and ranged in age from 20 to 53 years old (mean = 30.2 years). Subjects received either class credit or a small compensation for volunteering to

participate.

Procedure

Subjects completed a 4-part questionnaire. The first part of the questionnaire was the Litwin and Stringer Organizational Climate Questionnaire (Form B, 1968), which was used to measure the subject's perception of the climate of the work environment. The questionnaire was designed to measure nine different aspects of corporate climate in the following scales: 1) Structure, 2) Responsibility, 3) Reward, 4) Risk, 5) Warmth, 6) Support, 7) Standards, 8) Conflict, and 9) Identity. Item #19 ("There is a great deal of criticism in this organization") was omitted due to a clerical error.

The second part of the questionnaire was the Job Descriptive Index (Smith, Kendall, and Hulin, 1969), which measures five facets of job satisfaction: 1) satisfaction with the work itself, 2) quality of supervision, 3) level of pay, 4) the opportunity for promotion, and 5) coworkers. Rigorous tests of the JDI's reliability, validity, extensive norms, and applicability across a wide variety of demographic groups by Smith et al., has made the JDI a widely chosen measure of job satisfaction (Dunham, Smith, and Blackburn, 1977; Goliembewski and Yeager, 1978).

The third part was a 20-item stress symptom measure patterned after the health survey approach used by Belloc, Breslow and Hochstim (1971). Twelve distractor questions

were added to avoid subjects focusing only on physical difficulties. The last page of the questionnaire contained general demographic questions (sex, age, number of hours worked per week, etc.).

Subjects were given the questionnaire in class, or it was mailed to them, and all questionnaires were returned within two weeks.

Results

The climate responses were factor analyzed by the principal components method with varimax rotation. Varimax was chosen to allow comparisons to previous factor analyses of the LSOCQ, which have exclusively used this method. The factor analysis yielded a Heywood Case, so the communalities were artifically set to 1.0. Inspection of the scree plot suggested either 6 or 8 factors, accounting for 22.0% or 24.9% of the variance respectively. Eight factors had eigenvalues greater than 1.0, so 8 factors were retained, with 11% of the variance explained by the first factor. The factors were: Pleasant and Supportive Working Environment (Envir), Formal Organizational Rules (Rules), Worker Role Clarity (Clarity), Expectations for Excellence (Excel), Static vs. Changing Organization (Change), Worker Relationships with Management (Relate), Management Flexibilty (Flex), and Willingness to Take Risks (Risk). Scale scores were created for each of the eight scales.

Means and standard deviations were calculated for each

of the scales used. The point of indifference (where the subject neither agrees nor disagrees with the items comprising a scale) for the climate scales is 2.5. Based on the results obtained for this sample, on average people were less satisfied with promotion than the other facets of job satisfaction. The results of this analysis are reported in Table 1.

Insert Table 1 about here

Intercorrelations among the scales of the Job Descriptive Index and the Litwin and Stringer Organizational Climate Questionnaire were calculated. The JDI scales intercorrelations were all moderately high, and all except the coworker-pay and supevision-pay intercorrelations were significant. This result compares favorably with that reported by Smith et al. (1969) of generally high intercorrelations among the JDI scales. Generally, people who were satisfied with the work itself tended to be satisfied with other facets of their job as well. Intercorrelations among the scales of the climate questionnaire were generally lower than those found among the JDI scales, and 22 of the 36 correlations were significant. The Climate and JDI scale intercorrelations are reported in Tables 2 and 3.

Insert Tables 2 and 3 about here

The climate scales were correlated with the JDI scales to measure the degree of relationship between workers' perception of the work environment and their attitudes towards their job. The correlations ranged from moderate to near zero. The JDI scales of Supervision, Promotion, and Coworkers were significantly correlated with seven of the eight climate scales, and not significantly correlated with the climate scale Flex. The JDI scale of pay was not significantly correlated with any of the climate scales. The climate scales of Envir, Rules, Change, Relate, and Risk were correlated with four of the five JDI scales, but the climate scale Flex was not correlated with any of the JDI scales. The results of these analyses are reported in Table 4.

Insert Table 4 about here

The stress scale was correlated with the JDI scales and the climate scales to measure the degree of relationship between self-reported stress-related illnesses and both job satisfaction and climate. The JDI scales of Work, Supervision, and Promotion were significantly negatively correlated with stress, such that greater satisfaction with

work and supervision was related to lower reported incidence of stress-related illnesses; or conversely, lesser satisfaction with work was related to higher stress. Conversely, stress was not significantly correlated with any of the climate scales, with the largest correlation being only .20. The results of this analysis are reported in Table 5.

Insert Table 5 about here

The JDI scales were regressed on the stress scale to measure how well stress can be predicted from the JDI facets of job satisfaction. The simultaneous regression model using all of the JDI scales yielded a squared multiple correlation of .09, and $F=1.13$, $p=.36$, indicating that 9% of the variance in stress can be accounted for by the linear combination of JDI scale scores. A model using only Work (the scale with the largest zero order correlation with stress) produced a squared multiple correlation of .08, $F=5.83$, $p=.02$.

In a similar analysis, the climate scales were regressed on the stress scale to measure how well stress could be predicted from measures of workers' perceptions of the work environment. The simultaneous regression model using all of the climate scales yielded a squared multiple correlation of .13, and $F=1.04$, $p=.42$, indicating that 13%

of the variance in stress can be accounted for by the linear combination of the LSOCQ scale scores. This finding is not surprising given the low and non-significant correlations between the climate and stress scales. A model using the single predictor Risk produced a squared multiple correlation of .04, and F=2.00, p=.16.

A third regression analysis was calculated, regressing both the climate and job satisfaction scales on stress. The model produced a squared multiple correlation of .19, and F=0.85, p=.61, indicating the 19% of the variance in stress could be accounted for by climate and job satisfaction.

Discussion

This study showed that certain facets of job satisfaction and certain dimensions of organizational climate are correlated, but that the two constructs are not redundant. Although most of the JDI scales were significantly correlated with most of the LSOCQ scales, Satisfaction with Pay was not correlated with any of the climate scales, and Management Flexibility was not correlated with any of the job satisfaction scales. Clearly, the constructs measured by the climate questionnaire overlap to a high degree with the constructs measured by the JDI, but they are not identical.

While it seems reasonable to suspect that stress would have an effect on worker perceptions of organizational

climate, no evidence for such a relationship was found. None of the correlations between the climate scales and the stress scale were statistically significant. It may be possible for the climate of the organization to not be stressful, while the work itself is stressful. A regression analysis using eight all of the climate scales to predict stress was also not statistically significant, and accounted for 13% of the variance in stress.

However, there was a significant relationship between some facets of job satisfaction and stress. The correlations of the Work, Supervision, and Promote scales with stress were statistically significant. The regression analysis using all five of the JDI scales accounted for a mere 9% of the variance in stress. A third regression analysis using all of the JDI and climate scales (i.e., a 13 variable model) yielded a statistically non-significant model with 19% of the variance in stress accounted for. These results may demonstrate that it is not the organizational climate that creates a stressful environment, but the work itself and the people around a worker that leads to perceptions of the workplace as stressful.

This study also provides further evidence about the instability of the factor structure of the Litwin and Stringer Organizational Climate Questionnaire. Previous studies factor analyzing the LSOCQ have found different items loading on diverse factors and widely differing

numbers of factors retained. These studies have generally used homogeneous samples drawn from a single organization, in contrast to the heterogeneous sample that was used in the development of the questionnaire. However, even with a heterogenous sample such as the one used here, the obtained factors did not match the a priori factors suggested by Litwin and Stringer. Researchers using the LSOCQ as a measure of organizational climate should plan to factor analyze their data before further analyses are done.

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Table 1

Means and Standard Deviations for JDI, Stress, and Climate Scales

Scale	Mean	StDev
JDI		
Work	31.83	11.62
Pay*	30.21	13.52
Super	39.63	12.03
Promote*	22.86	19.06
Cowork	37.93	12.91
Climate		
Envir	2.30	0.57
Rules	2.44	0.77
Clarity	2.69	0.55
Excel	2.31	0.62
Change	2.56	0.58
Relate	2.59	0.59
Flex	2.46	0.48
Risk	2.59	0.62
Identity	12.01	2.01
Stress	54.96	8.36

Note. * = the mean and standard deviation doubled to make all of the JDI scales comparable.

Table 2

JDI Scale Intercorrelations

Scale	Work	Pay	Promote	Super
Work	-			
Pay	.41*	-		
Promote	.50*	.43*	-	
Super	.54*	.23	.59*	-
Cowork	.45*	.08	.32*	.58*

Note. * = significant at the .05 level

Table 3

Climate Scale Intercorrelations

Scale	Envir	Rules	Clarity	Excel	Change	Relate	Flex
Envir	-						
Rules	.40*	-					
Clarity	-.42*	-.19	-				
Excel	.30*	.32*	-.16	-			
Change	-.50*	-.46*	.28*	-.26*	-		
Relate	-.64*	-.31*	.35*	-.32*	.42*	-	
Flex	.29*	.18	-.08	.16	-.29*	-.24*	-
Risk	.49*	.38*	-.19	.39*	-.47*	-.58*	.29*

Note. * = significant at the .05 level

Table 4

Correlations Between Climate Scales and JDI Scales

Scale	Work	Pay	Super	Promote	Cowork
Envir	-.34*	-.01	-.62*	-.50*	-.54*
Rules	-.31*	-.18	-.45*	-.37*	-.29*
Clarity	.23	.07	.26*	.29*	.31*
Excel	-.19	-.08	-.38*	-.42*	-.22
Change	.24*	-.01	-.39*	.26*	.38*
Relate	.25*	.03	.39*	.45*	.29*
Flex	-.10	.05	-.06	-.23	-.10
Risk	-.25*	-.20	-.32*	-.42*	-.32*

Note. * = significant at the .05 level

Table 5

Climate and JDI Scales Correlations with Stress Scale

Scale	Correlation
JDI	
Work	-.29*
Pay	-.17
Super	-.26*
Promote	-.24*
Cowork	-.16
Climate	
Envir	.09
Rules	.17
Clarity	-.18
Excel	.11
Change	.04
Relate	-.20
Flex	-.02
Risk	.17

Note. * = significant at the .05 level